<center>**REMARKS**</center>

I.   Introduction

With the addition of new claims 12 and 13, claims 5 to 13 are currently pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicant thanks the Examiner for considering the previously filed Information Disclosure Statements, PTO-1449 papers, and cited references.

II.   Rejection of Claims 5 and 8 to 10 Under 35 U.S.C. § 103(a)

Claims 5 and 8 to 10 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,658,564 ("the Smith reference"), U.S. Patent No. 6,076,157 ("the Borkenhagen reference"), and U.S. Patent No. 5,812,844 ("the Jones reference"). It is respectfully submitted that the combination of the Smith, Borkenhagen, and Jones references does not render unpatentable any of the present claims, and the present rejection should be withdrawn, for at least the following reasons.

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied.

First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). As clearly indicated by the Supreme Court, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, at 1741.

Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986).

Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As explained herein, the Office Action does not satisfy these requirements of § 103 as to all of the features of the claims, as presented herein.

Claim 5 relates to a method for operating a reconfigurable unit and includes, *inter alia*, the features of *increasing, by the first configuration, the first configuration's maximum allowed runtime*, and *if an interrupt occurs, suppressing the increase in response to the interrupt*.

None of the cited references disclose or suggest applying a maximum allowed runtime to a configuration. Instead, the Smith and Borkenhagen references, for example, at most, suggest a maximum allowed runtime for a thread or function. Indeed, the Office Action refers to the Smith reference as assertedly disclosing a configuration, besides for threads. However, the mere mentioning in the Smith reference of a configuration and of a thread in no way suggests applying a maximum runtime to a configuration as with a thread in the Borkenhagen reference. Indeed, threads are parts of a program that can be executed independently of each other, for example, in parallel, whereas configurations are of the function and/or interconnection of reconfigurable processing cells, which can then be used in their configurations for executing one or more parts of a program. Thus, there is no one-to-one correspondence of a thread to a configuration, and the reference to a forced thread switch after some time in the Borkenhagen reference in no way suggests a forced configuration switch after some time.

As for the Smith reference, it indicates that a function may be compiled into a software implementation and a hardware implementation, which may be alternatively selectable by an operating system at execution time depending on prevailing system demands. In other words, the Smith reference provides for configurations used as hardware implementations of what would otherwise be software functions, and which may be used instead of, and as the counterpart of, the software functions. At column 8, line 66 to column 9, line 4, the Smith reference merely suggests applying a time-multiplexing system to *functions*. Nowhere does the Smith reference suggest applying a time-multiplexing system to *configurations*. While the Smith reference may provide certain configurations of hardware that provide for operation in a manner that corresponds in its entirety to a function as a whole, the time-multiplexing is ultimately provided on a function-by-function basis, and not a configuration-by-configuration basis. For example, if a configuration is usable for

multiple functions, then, while the time-multiplexing may provide for interrupting a particular function, the configuration may continue to be used without reconfiguration.

Moreover, the Office Action at page 3 admits that "Smith does not disclose of increasing, by the first configuration, the first configuration's maximum allowed runtime. Smith also does not explicitly disclose of if an interrupt occurs, suppressing the increase in response to the interrupt." Specifically, in this regard, the Smith reference states that different functions have "*predetermined* time intervals." Col. 9, line 3. Moreover, nowhere does the Smith reference even refer to increasing such predetermined time intervals, much less increasing by a first configuration. Accordingly, since the Smith reference does not disclose increasing a maximum allowed runtime, the Smith reference also does not disclose suppressing such an increase. Therefore, even if the Smith reference had suggested a maximum allowed runtime for a configuration (which it does not, as explained above), the Smith reference does not disclose or suggest the features of *increasing, by the first configuration, the first configuration's maximum allowed runtime*, and *if an interrupt occurs, suppressing the increase in response to the interrupt*.

Nonetheless, the Office Action at pages 3 to 4 cites column 15, lines 1 to 19 of the Borkenhagen reference as assertedly disclosing the feature of *increasing, by the first configuration, the first configuration's maximum allowed runtime*. However, even if the Borkenhagen reference had suggested a maximum allowed runtime for a configuration (which it does not), the Borkenhagen reference merely states that "if all other threads … are not ready to execute instructions, *the thread switch controller 450* does not force a thread switch." Col. 15, lines 7 to 10 (emphasis added). Thus, the Borkenhagen reference merely describes a waiting period during which the thread switch controller 450 waits until another thread is ready to execute instructions, which does not constitute increasing a maximum allowed runtime. Indeed, once another thread is ready to execute, a switch would occur according to the Borkenhagen reference, without waiting for a maximum allowed runtime to expire, in contrast to claim 5 which recites *reconfiguring the reconfigurable unit with a second configuration in response to expiry of the increased maximum allowed runtime*.

Further, no first configuration of the Borkenhagen reference causes an increase of a first configuration's maximum allowed runtime. Instead, it is the thread switch controller 450 of the Borkenhagen reference that controls the timing of a thread switch. Accordingly, since the Borkenhagen reference does not disclose increasing by a first configuration a maximum allowed runtime, the Borkenhagen reference also does not disclose suppressing such an increase. Therefore, the Borkenhagen reference does not disclose or

suggest the features of *increasing, by the first configuration, the first configuration's maximum allowed runtime*, and *if an interrupt occurs, suppressing the increase in response to the interrupt.*

Moreover, the Office Action at page 4 cites column 5, lines 26 to 29 of the Jones reference as assertedly disclosing the feature of *if an interrupt occurs, suppressing the increase in response to the interrupt*, because the Office Action at page 4 admits that "Smith and Borkenhagen do not explicitly disclose of if an interrupt occurs, suppressing the increase in response to the interrupt." However, the Jones reference merely generally states that "device interrupt handling is scheduled against the tasks performed by other executing programs." Col. 5, lines 28 to 29. The cited section of the Jones references does not disclose suppressing an increase by a first configuration of a maximum allowed runtime. At most, the cited section of the Jones reference merely refers to scheduling interrupts along with other tasks. Therefore, the Jones reference does not disclose or suggest the features of *increasing, by the first configuration, the first configuration's maximum allowed runtime*, and *if an interrupt occurs, suppressing the increase in response to the interrupt.*

Further, any combination of the Smith, Borkenhagen, and Jones references does not disclose all of the features included in claim 5. As more fully set forth above, none of the cited references disclose or suggest a maximum allowed runtime applied to a configuration. Further, the Smith reference merely refers to *predetermined* time intervals that are not increased, the Borkenhagen reference merely refers to a *thread switch controller* that may wait to perform a thread switch, and the Jones reference merely generally refers to *scheduling interrupts*. Thus, at most, the proposed combination of the Smith, Borkenhagen, and Jones references may merely describe a first task having predetermined time intervals that are not increased, in which a thread switch may be delayed by a thread switch controller, and which may schedule interrupts. Accordingly, the proposed combination of the Smith, Borkenhagen, and Jones references does not disclose or suggest the features of *increasing, by the first configuration, the first configuration's maximum allowed runtime*, and *if an interrupt occurs, suppressing the increase in response to the interrupt.*

For all of the foregoing reasons the combination of the Smith, Borkenhagen, and Jones references does not disclose or suggest all of the features of claim 5, and therefore does not render unpatentable claim 5.

Claim 8 relates to a method for operating a reconfigurable unit and includes, *inter alia*, the features of *triggering an increase, by the configuration, of the configuration's maximum allowed runtime*, and *responsive to an interrupt, suppressing an increase by the*

configuration of the maximum allowed runtime to respond to the interrupt upon expiry of the maximum allowed runtime. As noted above with respect to claim 5, the combination of the Smith, Borkenhagen, and Jones references does not disclose or suggest these features, and therefore does not render unpatentable claim 8.

Claim 9 relates to a method for operating a reconfigurable unit and includes, *inter alia*, the features of *increasing, by a configuration having a maximum allowed runtime, the configuration's maximum allowed runtime,* and *suppressing the increase* [of the maximum allowed runtime] *in response to an interrupt.* As noted above with respect to claim 5, the combination of the Smith, Borkenhagen, and Jones references does not disclose or suggest these features, and therefore does not render unpatentable claim 9.

Claim 10 relates to a method for operating a reconfigurable unit and includes, *inter alia*, the features of *if an interrupt does not occur, the first configuration triggering a counter reset, the counter reset increasing the maximum allowed runtime,* and *if an interrupt does occur, responsive to the occurrence of the interrupt, the maximum allowed runtime is not increased.* As noted above with respect to claim 5, the combination of the Smith, Borkenhagen, and Jones references does not disclose or suggest these features, and therefore does not render unpatentable claim 10.

Withdrawal of this obviousness rejection of claims 5 and 8 to 10 is therefore respectfully requested.

III. Rejection of Claim 11 Under 35 U.S.C. § 103(a)

Claim 11 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the Smith and Borkenhagen references. It is respectfully submitted that the combination of the Smith and Borkenhagen references does not render unpatentable claim 11, and the present rejection should be withdrawn, for at least the following reasons.

Claim 11 relates to a reconfigurable unit and includes, *inter alia*, the features that a *configuration is adapted to trigger a counter reset to increase its maximum allowed runtime conditional at least upon that an interrupt is not detected and processing is to continue without a thread switch and without a task switch.* As noted above with respect to claim 5, the combination of the Smith and Borkenhagen references does not disclose or suggest these features, and therefore does not render unpatentable claim 11.

Withdrawal of this obviousness rejection of claim 11 is therefore respectfully requested.

IV. Rejection of Claim 6 Under 35 U.S.C. § 103(a)

Claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the Smith, Borkenhagen, and Jones references, in further view of "Parallel Counters For Signed Binary Signals" ("the Parhami reference"). It is respectfully submitted that the combination of the Smith, Borkenhagen, Jones, and Parhami references does not render unpatentable claim 6, and the present rejection should be withdrawn, for at least the following reasons.

Claim 6 depends from claim 5 and is therefore allowable for at least the same reasons as claim 5, since the Parhami reference does not correct the critical deficiencies of the combination of the Smith, Borkenhagen, and Jones references noted above.

Withdrawal of this obviousness rejection of claim 6 is therefore respectfully requested.

V. Rejection of Claim 7 Under 35 U.S.C. § 103(a)

Claim 7 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the Smith, Borkenhagen, and Jones references, in further view of U.S. Patent No. 4,959,781 ("the Rubinstein reference"). It is respectfully submitted that the combination of the Smith, Borkenhagen, Jones, and Rubenstein references does not render unpatentable claim 7, and the present rejection should be withdrawn, for at least the following reasons.

Claim 7 depends from claim 5 and is therefore allowable for at least the same reasons as claim 5, since the Rubenstein reference does not correct the critical deficiencies of the combination of the Smith, Borkenhagen, and Jones references noted above.

Withdrawal of this obviousness rejection of claim 7 is therefore respectfully requested.

VI. New Claims 12 and 13

Claims 12 and 13 have been added. Claims 12 and 13 do not add new matter and are supported by the application, including specification, as originally filed. Claims 12 and 13 depend from claim 5 and are therefore allowable for at least the same reasons as claim 5.

VII. Conclusion

In light of the foregoing, it is respectfully submitted that all of the presently pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

Dated: <u>October 5, 2010</u>

By: <u>/Aaron Grunberger/</u>
Aaron Grunberger
Reg. No. 59,210

KENYON & KENYON LLP
One Broadway
New York, New York 10004
(212) 425-7200

CUSTOMER NO 26646